

What is claimed:

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1. An electro-luminescence display device, comprising:
a first pixel cell displaying a first color;
a second pixel cell displaying a second color;
a first driving circuit receiving a first driving voltage and applying a first driving current to the first pixel cell based on the first driving voltage; and
a second driving circuit receiving a second driving voltage and applying a second driving current to the second pixel cell based on the second driving voltage,
wherein the first and second driving voltages are equal, and the first and second driving currents are different.

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2. The device of claim 1, wherein the first driving circuit and the second driving circuit have a different structure.

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3. The device of claim 2, wherein
the first driving circuit comprises a first transistor having a first channel width and a first channel length, the first channel width to the first channel length forming a first ratio; and

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the second driving circuit comprises a second transistor having a second channel width and a second channel length, the second channel width to the second channel length forming a second ratio,
the first and second ratios being different.

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4. The device of claim 3, wherein the first pixel cell is a R pixel cell and the second pixel cell is a B pixel cell, and the first ratio is greater than the second ratio.

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5. The device of claim 3, wherein the first pixel cell is a R pixel cell, and the second pixel cell is a G pixel cell, and the first ratio is greater than the second ratio.
6. The device of claim 3, wherein the first pixel cell is a B pixel cell, and the second pixel cell is a G pixel cell.

7. The device of claim 1, wherein the first pixel cell is a R pixel cell and the second pixel cell is a B pixel cell, and first driving current is greater than the second driving current.

5 8. The device of claim 1, wherein the first pixel cell is a R pixel cell and the second pixel cell is a G pixel cell, and the first driving current is greater than the second driving current.

10 9. The device of claim 1, wherein the first pixel cell is a B pixel cell and a second pixel cell is a G pixel cell, and the first driving current is greater than the second driving current.

15 10. The device of claim 1, further comprising:
a third pixel cell displaying a third color; and
a third driving circuit receiving a third driving voltage and applying a third driving current to the third pixel cell based on the third driving voltage,
wherein the first, second and third driving voltages are equal, and the first, second and third driving currents are different.

20 11. The device of claim 10, wherein the first, second and third driving circuits have a different structure, respectively.

25 12. The device of claim 11, wherein
the first driving circuit comprises a first transistor having a first channel width and a first channel length, the first channel width to the first channel length forming a first ratio;

the second driving circuit comprises a second transistor having a second channel width and a second channel length, the second channel width to the second channel length forming a second ratio; and

30 the third driving circuit comprises a third transistor having a third channel width and a third channel length, the third channel width to the third channel length forming a third ratio,

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claim 12, wherein the first, second and third currents being different, respectively.

claim 10, wherein

the first pixel cells are R, B and G pixel cells;

the first current is greater than the second current, and

the second current is greater than the third current.

claim 13, wherein a brightness of the first pixel cells is substantially equal.

an electroluminescence display device, comprising:

a first transistor having a first channel width to the first channel length;

a second transistor including a second channel width to the second channel length, the second channel width being different from the first channel width, and the second channel length being different from the first channel length;

a first driving circuit driving the first transistor;

a second driving circuit driving the second transistor;

a first pixel cell and the second pixel cell;

wherein the first driving circuit is configured to drive the first pixel cell with a first current, and the second driving circuit is configured to drive the second pixel cell with a second current, and the first current is different from the second current.

claim 16, wherein

the first and second driving circuits drive the first pixel cell with a first current, and the first current is different from the second current.

claim 16, further comprising:

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18. The device of claim 16, further comprising:

the first, second and third ratios being different, respectively.

19. The device of claim 18, wherein

the first pixel cell is a R pixel cell, the second pixel cell is a B pixel cell and the

the first ratio is greater than the second ratio, and the second ratio is greater than the third ratio.

forming a plurality of gate lines and a plurality of data lines to form a lattice structure;

forming a driving transistor for each pixel cell; and

21. The method of claim 20, further comprising a step of forming a plurality of groups, each group having an R pixel cell, a G pixel cell, and a B pixel cell.

23. The method of claim 22, wherein the driving transistors are formed to different channel widths and channel lengths.

24. The method of claim 23, wherein the channel widths and channel lengths are determined based on whether the driving transistor is for the R pixel cell, for the G pixel cell, or for the B pixel cell.

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25. A method of forming a electro-luminescence display device, comprising:
forming a first pixel cell displaying a first color;
forming a second pixel cell displaying a second color;
forming a first driving circuit receiving a first driving voltage; and
forming a second driving circuit receiving a second driving voltage.

26. A method of forming a electro-luminescence display device, comprising:
forming a first driving circuit including a first transistor having a first channel width and a first channel length, the first channel width to the first channel length forming a first ratio; and

forming a second driving circuit including a second transistor having a second channel width and a second channel length, the second channel width to the second channel length forming a second ratio,
the first ratio being different than the second ratio.

27. A method of driving an electro-luminescence display device as recited in claim 1, the method comprising:

applying a first driving current to a first pixel cell based on a first driving voltage; and

applying a second driving current to a second pixel cell based on a second driving voltage,

wherein the first and second driving voltages are equal, and the first and second driving currents are different.

28. A method of driving an electro-luminescence display device as recited in claim 16, the method comprising:

driving a first driving circuit including a first transistor having a first channel width and a first channel length, based on a first ratio formed by the first channel width to the first channel length; and

driving a second driving circuit including a second transistor having a second channel width and a second channel length, based on a second ratio formed by the second channel width to the second channel length,

the first ratio being different than the second ratio.

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